may be provided by separate processors or by an integrated processor. The data processors may be of any type suitable to the local technical environment, and may include one or more of general purpose computers, special purpose computers, microprocessors, digital signal processors (DSPs), application specific integrated circuits (ASIC), gate level circuits and processors based on multi core processor architecture, as non limiting examples. The data processing may be distributed across several data processing modules. A data processor may be provided by means of, for example, at least one chip. Appropriate memory capacity can also be provided in the relevant devices. The memory or memories may be of any type suitable to the local technical environment and may be implemented using any suitable data storage technology, such as semiconductor based memory devices, magnetic memory devices and systems, optical memory devices and systems, fixed memory and removable memory.

[0115] In general, the various embodiments may be implemented in hardware or special purpose circuits, software, logic or any combination thereof. Some aspects may be implemented in hardware, while other aspects may be implemented in firmware or software which may be executed by a controller, microprocessor or other computing device, although the invention is not limited thereto. While various aspects may be illustrated and described as block diagrams, flow charts, or using some other pictorial representation, it is well understood that these blocks, apparatus, systems, techniques or methods described herein may be implemented in, as non-limiting examples, hardware, software, firmware, special purpose circuits or logic, general purpose hardware or controller or other computing devices, or some combination thereof. The software may be stored on such physical media as memory chips, or memory blocks implemented within the processor, magnetic media such as hard disk or floppy disks, and optical media such as for example DVD and the data variants thereof, CD.

[0116] The foregoing description has provided by way of exemplary and non-limiting examples a full and informative description of the exemplary embodiments of this invention. However, various modifications and adaptations may become apparent to those skilled in the relevant arts in view of the foregoing description, when read in conjunction with the accompanying drawings and the appended claims. However, all such and similar modifications of the teachings of this invention will still fall within the scope of this invention as defined in the appended claims. Indeed there is a further embodiment comprising a combination of one or more of any of the other embodiments previously discussed.

1. A method comprising:
- determining amount information relating to an amount of reference information a user equipment is to provide;
- causing said amount information to be provided to said user equipment; and
- using reference information from said user equipment to process data from said user equipment.

2. A method as claimed in claim **1**, wherein said amount information comprises a frequency for which said reference information is to be provided.

3. A method as claimed in claim **1**, wherein amount information indicates on which slots and/or symbols said reference information is to be transmitted.

4. A method as claimed in claim **1**, wherein said amount information indicates which subframes said reference information is to be transmitted.

5. A method as claimed in claim **1**, wherein said amount information comprises information identifying one of a plurality of available options.

6. A method as claimed in claim **1**, wherein said amount information comprises link adaptation information.

7. A method as claimed in claim **6**, wherein said link adaptation information comprises at least one of coding and modulation information, transport block size and transmission rank.

8. A method as claimed in claim **1**, comprising using said reference information to demodulate said data.

9. A method as claimed in claim **1**, wherein said reference information comprises at least one of demodulation reference signals and sounding reference signals.

10. A method as claimed in claim **1**, wherein said causing comprises causing said information to be sent to user equipment via a downlink channel.

11. A method as claimed in claim **1**, wherein said amount information provided to said user equipment comprises at least one of dynamic and semi-static information.

12. A method as claimed in claim **1**, comprising using previous reference information to process current data from said user equipment.

13. A method as claimed in claim **1** comprising determining amount information relating to an amount of reference information a user equipment is to provide on an uplink channel and using said reference information from said user equipment to process data on said uplink channel from said user equipment.

14. A method comprising:
- receiving information from which an amount of reference information a user equipment is to provide is obtained; and
- causing reference information to be provided to a base station in accordance with said received information.

15. A method as claimed in claim **14**, comprising causing data to be provided to a base station, an amount of said data being dependent on said amount of reference information.

16. A method as claimed in claim **14**, wherein said received information comprises link adaptation information from which said amount of reference information is determined.

17. A method as claimed in claim **16**, wherein said link adaptation information comprises at least one of coding and modulation information, transport block size and transmission rank.

18. A computer program comprising computer executable instructions which when run cause the method of claim **1** to be performed

19. An apparatus comprising at least one processor and at least one memory including computer code for one or more programs, the at least one memory and the computer code configured, with the at least one processor, to cause the apparatus at least to:
- determine amount information relating to an amount of reference information a user equipment is to provide;
- cause said amount information to be provided to said user equipment; and
- use reference information from said user equipment to process data from said user equipment.

20. An apparatus comprising at least one processor and at least one memory including computer code for one or more programs, the at least one memory and the computer code configured, with the at least one processor, to cause the apparatus at least to: